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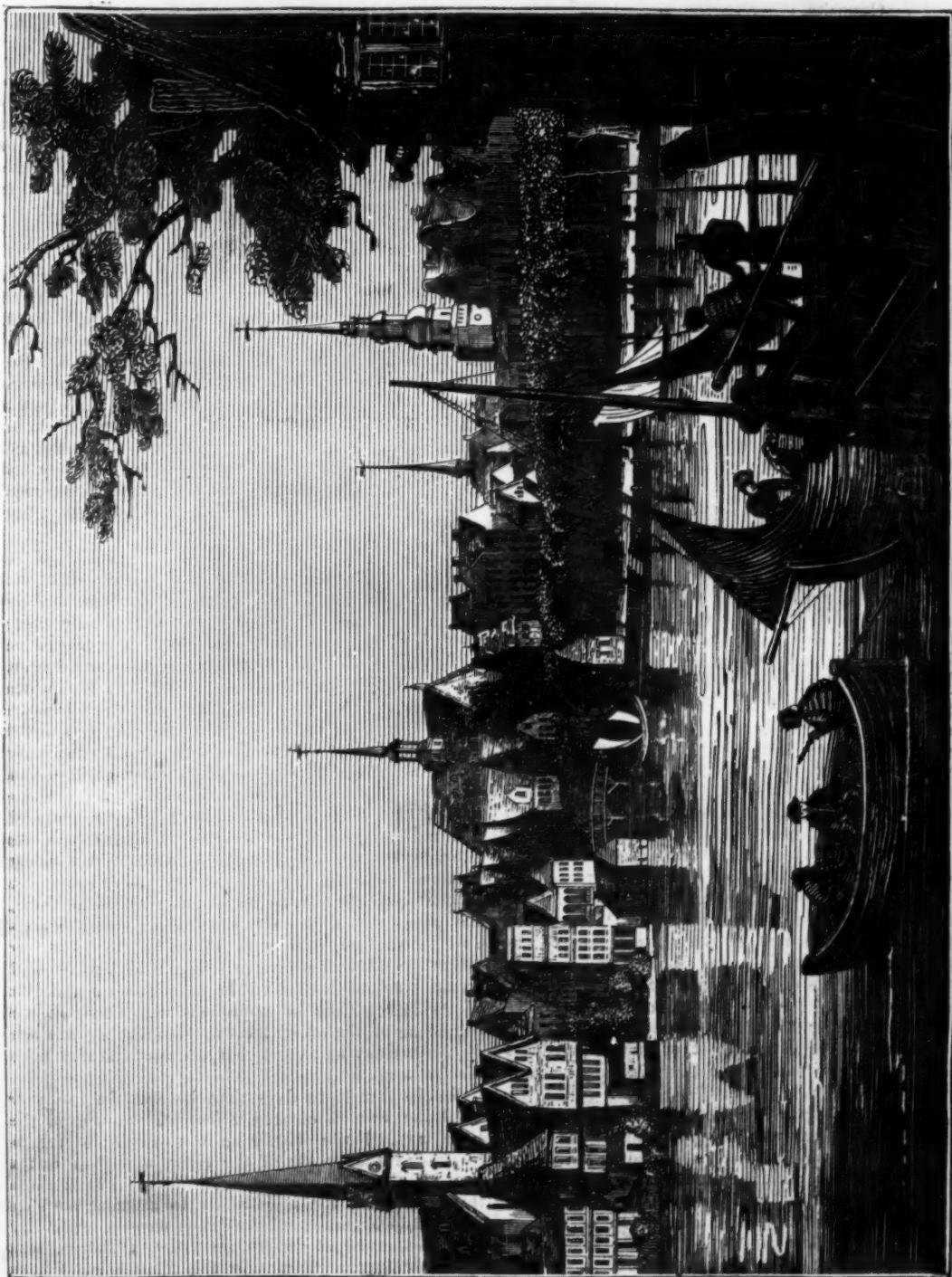
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HAMBURG. VIEW OF THE LADIES' WALK.

THE CITY OF HAMBURG.

HAMBURG, the first commercial city of Germany, and probably of the whole continent, is one of the four free towns which are admitted, as independent states, into the German Confederation,—the three others being Frankfort, Lubeck, and Bremen. Its situation is highly advantageous, and is the chief cause of its present importance, as it was also of its prosperity in former times. It is built on the northern bank of the Elbe, at the distance of about eighty miles from the sea, and just at the point where the navigation of that river, by large vessels, ceases, and where the use of rafts, or flat-bottomed boats, begins.—Opposite the city the river is about four miles broad; but just above it is divided by islands into several narrow and intricate channels, which do not admit the passage of ships. Two small streams, the Alster and the Bille, flow into the Elbe through the town; the first is by far the more considerable of the two, and forms, in the northern part of the town, a sort of reservoir, or small lake, from which the water is distributed so as to turn several mills, to supply numerous fountains, and to fill the canals which intersect the city, and especially the lower part of it, in such numbers that about ninety bridges are required for crossing them.

The origin of Hamburg is referred to the beginning of the ninth century, when Charlemagne built a citadel and a church on the heights between the Elbe and the eastern banks of the Alster: his object was to establish a station which might be a bulwark against a tribe of Slavonian Pagans, who were settled on the southern coasts of the Baltic. In spite of the various vicissitudes which it underwent, this place speedily became the resort of many traders and settlers; and, in the year 833, it was raised by Louis Le Débonnaire, the son and successor of Charlemagne, to be the seat of an archbishopric. In 845 the city was pillaged and partially destroyed by the Danes; and scarcely had it recovered from that disaster, when it suffered a similar infliction at the hands of the Slavonians. About half a century afterwards, the Emperor Otho erected Saxony into a duchy, and Hamburg, being within the district which went by that name, passed from under the immediate sovereignty of the empire, and became subject to the dukes of the new fief, from whom again, in the twelfth century, it passed to the counts of Holstein. In the meanwhile, much progress had been made in the extension of industry and commerce; and already the principles of freedom had begun to develop themselves in the rising community. As early as the middle of the twelfth century, corporations, or guilds, were formed for the protection and encouragement of different crafts and occupations. In the year 1152, we find that the union of "the Company of Mercers and Drapers" was confirmed by the approbation of the reigning duke, Henry the Lion. Riches, too, came to flow into the hands of the industrious burghers, and enabled them, according to the common practice of the middle ages, to extract, from the neediness of their sovereign lord, the grant of many privileges and immunities, which gave a fresh impulse to their growing prosperity.

In the year 1189, when Frederick the First, surnamed Barbarossa, went out upon the third land crusade, the people of this city supplied their master, Adolph the Third, with the means of accompanying his sovereign upon that unfortunate expedition; and, in return, they obtained the concession of various privileges which are important in the history of Hamburg, as the basis of its subsequent liberty, and the possession of which was guaranteed by two dis-

tingt charters; one signed by the count, and the other by the emperor. The tendency of these was to secure their independence, the freedom of their commerce, and their exemption from a variety of imposts; among them were stipulations that no fort should be erected within two miles of the city,—that the burghers should trade freely on the Elbe, from the city down to the sea,—and that they should not be liable to any charges on account of the foreign or domestic campaigns of their lord.

Scarcely had the thirteenth century begun, when the city was again embroiled in active warfare. Its old enemies, the Danes, took it three times in the space of fifteen years, and then sold it, for 700 marks of silver, to a certain Count Albrecht of Orlamund; but the purchaser, finding his title disputed by the Holstein family, resold the city to its own inhabitants for 1500 marks of silver; that is to say, for the consideration of that sum, he renounced all his rights of sovereignty over it. The inhabitants then began to govern themselves according to a constitution of their own framing; but, strangely enough, while their political freedom thus commenced, the archbishopric, which the son of Charlemagne had founded in their city, was transferred to Bremen. It happened, however, that the man who had sold them their freedom was defeated in his struggle with the count of Holstein; they were consequently obliged to open their city to the victorious Adolph, (the fourth of that name,) though they carefully secured the full enjoyment of all their privileges. How extensive these were may be conceived from the fact of their comprising the power of entering into treaties with foreigners. In 1238 the city formed a commercial alliance with the people inhabiting the country between the Elbe and the Weser; and, in 1241, entered into that union with Lubeck which is regarded as the commencement of the famous Hanseatic League.

From that time forward the advancement of Hamburg in wealth and independence was steadily progressive; its commerce became gradually more extended, and the ties which bound it in obedience to the counts of Holstein relaxed in the same degree. At last, being constituted, in 1368, the seat of an Imperial Fair, the city boldly refused to pay homage and fealty to its feudal lord, acknowledging a direct dependence upon the emperor only, and styling itself a free and imperial city of the German empire. In succeeding centuries it was not without a full share of the troubles arising from internal dissensions and external hostilities; the king of Denmark was its constant enemy, and his efforts to reassert his lost rights of sovereignty over it, caused many calamities to the inhabitants. In spite, however, of all these, the prosperity of the city continued; and the convention entered into with Denmark, in 1768, by which the Danish sovereign resigned his claims, and formally acknowledged its independence, relieved it of its last source of apprehension. Thus, at the beginning of the present century, Hamburg was one of the richest and most prosperous of the free cities of Germany.

But its disastrous days then began. In the year 1803 the French entered Hanover, and closed the Elbe against the English; our fleets in return blockaded the mouth of the river, and thus put a stop to the commerce of Hamburg. The French then compelled the inhabitants to advance the sum of 2,125,000 marks; similar exactions were repeatedly practised, until at length, in 1810, Hamburg was regularly incorporated with the French empire, as the capital of the newly-created department of the

Bouches de l'Elbe, or "Mouths of the Elbe." In the month of March, 1813, when Napoleon's reverses had begun, the invaders were obliged to withdraw; but by the end of May they were again in possession of the city, and the unfortunate inhabitants were then made to pay dearly for their temporary release. A fine of 48,000,000 of francs was exacted, and all respect for private property was set aside by the French commander Davoust, in his endeavours to convert the place into a military position; but before he could fortify it the war had been ended, and they quitted the city in the month of May, 1814. The loss which it had sustained between November, 1806, and the period of its deliverance, was estimated at about 140,000,000 of marks, or about 11,200,000*l.*; and the only compensation obtained was an assignment of French stock to the value of 500,000 francs, on the restoration of the Bourbons. When the French left the city the Russians entered it, and there they remained till the end of the year; since that time it has been left entirely to its own government.

Hamburg bears the marks of its antiquity visibly about it at the present day; the streets are narrow, crooked, and ill-paved, the houses small, high, and ill-built, and the whole city has a close and contracted appearance, seeming like what it really is—too small for its dense population. Its different portions are huddled together, as it were; no open places or squares interrupt the continuous masses of building, and impart salubrity, as well as beauty, to the city. There are, indeed, several which bear the name, but none which are justly entitled to it, unless we except the *Jungfern Stieg*, a famous public promenade, running above the border of the lake or basin, which we noticed as being formed by the Alster in the northern part of the town.

Dr. Thomas Nugent, who visited Germany in 1766, thus describes "the Jungfern Steig, or Maiden's Walk, where the inhabitants resort for the sake of company, air, and exercise. It is situated at the head of the Alster, and extends along this beautiful basin into the heart of the city. Its length may be about a thousand feet, but it is rather too narrow, being not above twenty or twenty-five feet in breadth; it is bordered round by a row of trees, and railed in on the water-side: there are several stairs for the convenience of boats and covered barges, which will hold eight or ten people, with a table: in these they frequently sup, being rowed up and down, and music playing. On the other side is a handsome street with a row of fine houses."

The following extract from the pen of a more recent writer, will convey a lively and correct picture of its present appearance.

"Some Hanoverians" says Mr. Hodgskin, "had described to me with ecstasy a public promenade at Hamburg, called the *Jungfern Stieg*, and I had been so long accustomed to their own quietness, that I was almost prepared to join in their opinions when I saw the quantity of people, and of apparent enjoyment on this walk, on the evening of my arrival in Hamburg. On one side, throughout its whole length, there is a row of handsome houses, a broad carriage-road, a walk planted with four rows of trees, and the other side is bounded by a small handsome lake, formed by the Alster, a river that flows into the Elbe at Hamburg. The coffee-houses may almost vie with those of the Palais Royal for splendour; and towards evening it seemed as if the whole population of the town were collected on this single spot. The busy hum of the conversation of such a multitude, and their restless movement, was like the waves as they

break on the shore. Many were walking; many were sitting about the coffee-houses or on benches, and many were idly gazing on the still waters. It was a beautiful summer's evening, and the moon shone both in the heavens and in the lake. Several boats floated on it, and the people in them were still, and seemed more disposed to enjoy than to disturb the serenity. The multitude were of all ages, of all descriptions, and of all countries, and remained enjoying themselves late in the night. In other parts of Germany the people go quietly home and to bed towards ten o'clock; but, at midnight, the walk was yet crowded, and it was long before all the revellers had retired."

In an enclosure on the outside of my garden is a small heap of manure, the materials of which came partly from the stable, and partly from the sea-shore. In a little hollow on the side of this heap, under a sort of pent-house formed by a lock of the sea-weed, a redbreast has built her nest, and hatched her young, unmolested by the gardeners and other persons who are continually passing by; for her situation is almost close to the garden-door; and to all appearance, insensible of any inconvenience from the manure heap having been recently dug away, within a couple of feet of her nest, which she goes in and out of with little scruple, in the presence of any one who happens to be near. The fact is, perhaps, not unworthy of notice, both on account of the substance on which the bird has chosen to establish herself, and of the public and much frequented situation.

A twelvemonth ago, I observed another redbreast's nest very pleasantly situated in a window of a house, at that time my residence, which stood in a garden. The house was almost covered with ivy; and round some of the windows was a light trellis, with which roses and other flowering plants were interwoven. On the sill of one of the windows, and in a snug recess within the trellis, the redbreast took up her abode, where she might be continually seen from the parlour to which the window belonged, during the whole process of incubation, till, in due time, she carried off her young brood in safety. She was much the object of observation to different members of the family, and often would have escaped notice, as she sat patiently on her nest, but for the bright sparkling of her eye, which seemed to speculate on the observers as curiously as theirs did on her. But the window never being opened, and care being taken not to disturb her, she arrived prosperously at the termination of her maternal cares.—*Field Naturalist.*

NATURE had bestowed upon Haydn a sonorous and delicate voice. When residing, during his childhood, in the house of his cousin, for the purpose of being instructed in music, chance brought to the house Reüter, Maître de Chapelle of St. Stephen's, the cathedral church of Vienna. He was in search of pupils to recruit his children of the choir. The schoolmaster soon proposed his little relative to him. He came, Reüter gave him a *canon* to sing at sight. The precision, the purity of tone, the spirit with which the child executed it, surprised him; but he was more especially charmed with the beauty of his voice. He only remarked, that he did not *shake*, and asked him the reason, with a smile. The child smartly replied, "How should you expect me to shake when my cousin does not know how himself?" "Come here," says Reüter, "I will teach you." He took him between his knees, showed him how he should rapidly bring together two notes, hold his breath, and agitate the palate. The child immediately made a good shake. Reüter, enchanted with the success of his scholar, took a plate of fine cherries which the cousin had caused to be brought for his illustrious brother-professor, and emptied them all into the child's pocket. His delight may be readily conceived. Haydn often mentioned this anecdote, and added, laughing, that whenever he happened to shake, he still thought he saw these beautiful cherries.—*Life of Haydn.*

NEVER shrink from doing anything which your business calls you to. The man who is above his business, may one day find his business above him.—DREW

THE PAPER MULBERRY-TREE.

THIS tree is a native of the east, and particularly of China and Japan, where it is employed in the manufacture of paper. The appearance of this useful tree is thus described.

From a strong, branched, woody root rises a straight, thick, equal trunk, very much branched out, covered with a fat, firm, clammy, chestnut-coloured bark, rough without and smooth on the inside, where it adheres to the wood, which is loose and brittle, with a large moist pith; the branches and twigs are very fat, covered with a small down, or wool, of a green colour, inclining to purple.



THE PAPER MULBERRY-TREE.

Every year, when the leaves are fallen off, or in the tenth Japanese month, which answers to our December, the twigs are cut into lengths, not exceeding three feet, and put together in bundles, to be afterwards boiled in an alkaline ley. These faggots are placed upright in a large kettle, which must be well covered, and boiled till the bark shrinks so far as to allow about half an inch of the wood to appear naked at the top; when the sticks have been sufficiently boiled, they are taken out of the water and exposed to the air to cool; the bark is then stripped from the wood and dried, and laid up to be manufactured at a future time.

When a sufficient quantity is collected, it is soaked in water for three or four days, and, when soft, the blackish skin which covered it is scraped off with a knife; at the same time also, the stronger bark, which is of full a year's growth, is separated from the thinner, which covered the younger branches, the former yielding the best and whitest paper, and the latter only a dark and indifferent sort. If there is any bark of more than a year's growth, it is likewise picked out and laid aside for the purpose of making a coarser description of paper. All knotty particles,

and discoloured portions, are also picked out and laid on one side. After it has been sufficiently cleansed and separated, it must be boiled in clear ley. During the time it is boiling, it is kept constantly agitated with a strong reed: this part of the process must be continued until the bark has become so tender as to separate, when gently touched with the finger, into flocks and fibres.

After the bark has been boiled, it has to be washed, and this part of the business is of no small consequence in paper-making, and must be managed with great judgment and attention; if it is not washed long enough, the paper will be strong and of a good body, but coarse and of little value. If, on the contrary, the washing has been continued too long, it will afford a whiter paper, but too spongy in its texture, and unfit to write on; so that the greatest care and judgment is necessary to avoid either extreme. The washing takes place in a running stream, the bark being placed in a sort of fan or sieve, which will let the water run through; it is stirred continually with the hands, until it becomes a delicately soft woolly pulp. For the finer sort of paper the washing must be repeated; but, in this case the bark must be put into a linen bag, instead of a sieve, for fear it should escape along with the water. The bark having been sufficiently washed, it is spread on a thick smooth wooden table, and beaten with a wooden mallet until it is sufficiently fine.

The bark, thus prepared, is put into a narrow tub with a slimy infusion of rice and of a root called *Oreni*. It is then stirred with a thin clean reed, until the ingredients are mixed into a uniform liquid mass of a proper consistence; this succeeds better in a narrow tub, but the pulp is afterwards placed in a larger and wider-mouthed vessel. The moulds on which the paper is to be made are formed of the stems of bulrushes cut into narrow strips, instead of brass wire, as in Europe. Out of this larger vessel the leaves of paper are lifted, one by one, by means of the mould. Nothing remains now, but proper management in the drying of them. In order to this, they are laid up in heaps upon a table covered with a double mat, and a small piece of reed is placed between every leaf, which, standing out a little way, serves afterwards to lift them up conveniently, leaf by leaf.

Every heap is covered with a small plank or board of the same shape and size as the paper, on which are laid weights, first, indeed, very small ones, for fear the leaves, being yet very wet and tender, should be pressed into a solid mass; but, by degrees, the pressure is increased, for the purpose of pressing out all the water. The next day, the weights are taken off, and the leaves lifted up singly, by the help of the small reeds already mentioned, and carried on the palm of the hand to a long rough plank, on which they are placed, and afterwards dried in the sun.

THE manner in which corn is preserved in Morocco is deserving of mention. A subterranean cellar is dug seven or eight feet in depth, the sides of which are covered with reeds and straw, the bottom part being matted, and straw placed over it. The grain is then deposited, and well protected at top by straw being placed over it: the opening is covered by a large slab, over which the earth is heaped in a mound, to prevent the rain settling and entering. In these kind of granaries, or *matamors*, as they are called, and which are usually made on sloping ground, to secure them from damp, wheat and barley, I was informed, would keep perfectly good for five years, and other grain to a longer period. The largest *matamors* are at Rabat, and are capable of containing some hundred bushels.—*Scanned by SIR ARTHUR DE CAPELL BROOKE*

INSIGNIFICANCE OF THIS WORLD.

THOUGH the earth were to be burned up, though the trumpet of its dissolution were sounded, though yon sky were to pass away as a scroll, and every visible glory which the finger of the Divinity has inscribed on it were extinguished for ever—an event so awful to us, and to every world in our vicinity, by which so many suns would be extinguished, and so many varied scenes of life and population would rush into forgetfulness,—what is it in the high scale of the Almighty's workmanship? A mere shred, which, though scattered into nothing, would leave the universe of God one entire scene of greatness and majesty. Though the earth and the heavens were to disappear, there are other worlds which roll afar; the light of other suns shines upon them; and the sky which mantles them, is garnished with other stars. Is it presumption to say, that the moral world extends to these distant and unknown regions? that they are occupied with people? that the charities of home and of neighbourhood flourish there? that the praises of God are there lifted up, and his goodness rejoiced in? that there piety has its temples and its offerings? and the richness of the Divine attributes is there felt and admired by intelligent worshippers?

And what is this world in the immensity which teems with them; and what are they who occupy it? The universe at large would suffer as little in its splendour and variety by the destruction of our planet, as the verdure and sublime magnitude of a forest would suffer by the fall of a single leaf. The leaf quivers on the branch which supports it. It lies at the mercy of the slightest accident. A breath of wind tears it from its stem, and it lights on the stream of water which passes underneath. In a moment of time, the life, which we know by the microscope it teems with, is extinguished; and an occurrence so insignificant in the eye of man, and in the scale of his observation, carries in it, to the myriads which people this little leaf, an event as terrible and as decisive as the destruction of a world.

Now, on the grand scale of the universe, we, the occupiers of this ball, which performs its little round among the suns and the systems which astronomy has unfolded—we may feel the same littleness, and the same insecurity. We differ from the leaf only in this circumstance, that it would require the operation of greater elements to destroy us. But these elements exist. The fire which rages within, may lift its devouring energy to the surface of our planet, and transform it into one wide and wasting volcano. The sudden formation of elastic matter in the bowels of the earth—and it lies within the agency of known substances to accomplish this—may explode it into fragments. The exhalation of noxious air from below may impart a virulence to the air that is around us; it may affect the delicate portion of its ingredients; and the whole of animated nature may wither and die under the malignity of a tainted atmosphere. A blazing comet may cross this fated planet in its orbit, and realize all the terrors which superstition has conceived of it. We cannot anticipate with precision the consequences of an event which every astronomer must know to lie within the limits of chance and probability. It may hurry our globe towards the sun—or drag it to the outer regions of the planetary system—or give it a new axis of revolution—and the effect which I shall simply announce, without explaining it, would be to change the place of the ocean, and bring another mighty flood upon our islands and continents.

These are accidents which may happen in a single instant of time, and against which nothing known in

the present system of things provides us with any security. They might not annihilate the earth, but they would unpeople it; and we, who tread its surface with such firm and assured footsteps, are at the mercy of devouring elements, which, if let loose upon us by the hand of the Almighty, would spread solitude, and silence, and death over the dominions of the world.

Now, it is this littleness, and this insecurity, which make the protection of the Almighty so dear to us, and bring with such emphasis to every pious bosom the holy lessons of humility and gratitude. The God who sitteth above, and presides in high authority over all worlds, is mindful of man; and, though at this moment his energy is felt in the remotest provinces of creation, we may feel the same security in his providence, as if we were the objects of his undivided care.

It is not for us to bring our minds up to this mysterious agency. But such is the incomprehensible fact, that the same Being, whose eye is abroad over the whole universe, gives vegetation to every blade of grass, and motion to every particle of blood which circulates through the veins of the minutest animal: that, though his mind takes into its comprehensive grasp immensity and all its wonders, I am as much known to him as if I were the single object of his attention; that he marks all my thoughts; that he gives birth to every feeling and every movement within me; and that, with an exercise of power which I can neither describe nor comprehend, the same God who sits in the highest heaven, and reigns over the glories of the firmament, is at my right hand, to give me every breath which I draw, and every comfort which I enjoy.—CHALMERS.

IF we do at all believe in the views which Christianity reveals, and that this life is indeed a scene of probation, how grateful should we be that it is still so rich in sources of enjoyment! The loveliness of nature, the sweet ties of kindred and friendship,—how pure, how delightful are the pleasures they procure! and even when our sympathies are excited by the sorrows and sufferings of humanity there is a counterbalancing relief in the prompt benevolence and active usefulness which they call forth.—*Private Life.*

It is only in the company of the good that real enjoyment is to be found; any other society is hollow and heartless. You may be excited by the play of wit, by the collision of ambitious spirits, and by the brilliant exhibition of self-confident power; but the satisfaction ends with the scene. Far unlike this is the quiet, confiding intercourse of sincere minds and friendly hearts, knowing, and loving, and esteeming each other.—*The Doctor.*

A GENTLE REBUKE.—In the life of John Fox, author of the *Book of Martyrs*, is the following anecdote. "It happened at his own table, that a gentleman there spake somewhat too freely against the Earl of Leicester, which, when Master Fox heard, he commanded a bowl filled with wine to be brought to him, which being done, 'This bowl (quoth he,) was given me by the Earl of Leicester! so stopping the gentleman in his intemperate speeches without reprehending him.'"

As pride sometimes is hid under humility, idleness is often covered by turbulence and hurry. He that neglects his known duty and real employment, naturally endeavours to crowd his mind with something that may bar out the remembrance of his own folly, and does anything but what he ought to do with eager diligence, that he may keep himself in his own favour.—*Idler.*

A PRECEPT OF ST. BERNARD'S—Lead a good life; that is, live regularly, sociably, and humbly: regularly as to yourself; sociably as to your neighbour; humbly as to your God.

THE ORGANS OF SENSE.

I. TOUCH.

FIVE senses are generally attributed to the most perfect animals, viz. sight, smell, taste, touch, and hearing, of which the eye, the nose, the tongue, and palate, the skin or general surface of the body, and the ear, are considered the appropriate organs. Every animal possesses one or more of these faculties, which enable it to maintain its connexion with the external world, and deprived of which it would, in fact, cease to be an animal. For had it no sensations, it would want all stimulus to action; but thought and motion are both action, and would both, therefore be extinct; and the animal, fixed to the spot, and insensible to all the objects by which it was surrounded, would cease to be an animal; it would be a plant. On the contrary, the more sensibility an animal possesses, the more energetic and frequent are its movements: the oyster, which in its perceptions is extremely limited, scarcely ever leaves the same place, its movements being chiefly confined to such muscular contractions as take place within its shell; while the bird, endowed with sensibility in a high degree, is always in action. It has even been thought that the same distinction might be extended to man, and that those who receive very lively impressions from their senses, exhibit also a greater portion of energy and activity.

TOUCH is the most generally diffused of our senses, and the most generally useful. It enables us to acquire notions respecting the figure, size, weight, hardness, or softness, temperature, distance, &c., of bodies, and the great number of different objects to which it can be directed have caused, particularly of late years, a pretty general impression that it should be considered rather as many than as one sense.

The use of the senses being to make us acquainted with the qualities of various objects, it became necessary that their organs should be placed in the surface of our bodies. The whole skin is, in man, an organ of touch. It consists essentially of two distinct layers, the *dermis* or true skin, which is internal, and the *epidermis* or scarf-skin, which is external. The former, which constitutes the immediate and proper envelope of the body, is formed of fine, pliant, and flexible scales, closely matted together, and perforated by innumerable vessels, for the purpose of carrying on the perspiration and absorption which takes place from the surface, as well as by the extremities of the nerves, which an inspection by the microscope shows rising through it. These nerves, therefore, constitute the internal part of the organ of sense in touch; but were they directly brought into contact with the objects of which they are to judge, they would, from their extreme sensibility, give us scarce any other perception than that of pain, which we know to arise when any sensation is carried to excess.

To prevent this, therefore, the external part of the organ of touch is added, namely the *scarf-skin*, which is a fine transparent flexible envelope, placed over the entire body, completely insensible itself, and blunting the sensibility of the nerves of touch, by its thin membranous substance coming between them and the bodies touched. It is this scarf-skin which is removed by the application of a blister, and we well know what pain results from the simple exposure to the air of the unprotected ends of the nerves. The uses, then, of the two parts of the organ of touch are perfectly distinct, and they have this peculiarity, that the external is used to diminish the force of the impression before it reaches the internal, while in

the eye and the ear the object seems to act to concentrate and increase.

Besides being an organ of touch, the skin is also meant to be an organ of protection. The conditions necessary for each of these ends are so inconsistent, that the one can only be perfected at the expense of the other; and as delicate sensibility is more important to man than to other animals, while these latter, being deprived of the resources afforded by reason, stand more in need of defence against external injury, we accordingly find that the skin is best adapted in man to convey the sense of touch, and in the lower animals for defence, and it is further adapted for this, by the addition of fur, bristles, hair, feathers, crust, shell, &c., all of which diminish its utility as a delicate organ of tact. When the latter condition, however, becomes again requisite, means are taken to ensure its presence, and the wide membranous wings of the bat, thickly supplied with nerves, are so extremely sensitive, as to enable it by this means alone, even when its eyes are put out, to avoid numerous obstacles placed in its way.

But the perfection of the sense of touch seems to be situated in the human hand, than which there is no organ more beautifully adapted for its exercise. Situated at the extremity of a long flexible lever, it can be easily applied and moved in all directions round the object to be examined; composed of several small bones (so many as twenty-seven), it obtains from their motions on each other, a sufficient degree of flexibility, which becomes much increased towards the end, where the division into separate fingers takes place;—supplied with nerves, numerous and highly sensitive, supported, particularly towards the ends of the fingers, by a soft pulpy cushion, which enables them to be applied with the greatest accuracy and effect, while they are stimulated and excited to act by the rush of blood to the fine vascular tissue in which they are imbedded,—the hand concentrates in itself every necessary qualification for exercising this sense in its greatest perfection, and must enable us to obtain perceptions far excelling in accuracy and clearness any that can be obtained through such organs as the lips, the paw, the tail, the claws, &c. of the lower animals.

[Abridged from *London's Popular Physiology*.]

It has been found that by mixing certain colouring substances with the food of animals, the bones will soon become deeply tinged by them. This fact was discovered accidentally by Mr. Belchier, who gives the following account of the circumstances that led him to notice it. Happening to be dining with a calico-printer on a leg of fresh-pork, he was surprised to observe that the bones, instead of being white as usual, were of a deep-red colour; and on inquiring into the circumstances, he learned that the pig had been fed upon the refuse of the dyeing vats, which contained a large quantity of the colouring substance of madder. So curious a fact naturally attracted much attention among physiologists; and many experiments were undertaken, with a view to ascertain the time required to produce this change, and to determine whether the effect was permanent, or only temporary. The red tinge was found to be communicated much more quickly to the bones of growing animals, than to those which had already attained their full size. Thus, the bones of a young pigeon were tinged of a rose colour in twenty-four hours, and of a deep scarlet in three days; while in the adult bird, fifteen days were required merely to produce the rose colour. The dye was more intense in the solid parts of those bones which were nearest to the centre of circulation, while in bones of equal solidity, but more remote from the heart, the tinge was fainter. The bone was of a deeper dye in proportion to the length of time the animal had been fed upon madder. When this diet was discontinued, the colour became gradually more faint, till it entirely disappeared. —ROGET.

A VOYAGE ROUND THE WORLD.

EMBLEM of eternity,
Unbeginning endless sea!
Let me launch my soul on thee.
Sail, nor keel, nor helm, nor oar,
Need I, ask I, to explore
Thine expanse from shore to shore.

Eager fancy, unconfined
In a voyage of the mind,
Sweeps along thee like the wind.
Where the billows cease to roll,
Round the silence of the pole,
Thence set out, my venturesome soul!

See, by Greenland cold and wild,
Rocks of ice eternal piled;
Yet the mother loves her child.
Next on lonely Labrador,
Let me hear the snow-falls roar,
Devastating all before.

But a brighter vision breaks
O'er Canadian woods and lakes;
—These my spirit soon forsakes,
Land of exiled Liberty,
Where our fathers once were free,
Brave New England, hail to thee!

Pennsylvania, while thy flood
Waters fields unbought with blood,
Stand for peace as thou hast stood.
The West Indies I behold,
Like the Hesperides of old,
—Trees of life, with fruits of gold!

South America expands
Mountain-forests, river-lands,
And a nobler race demands;
And a nobler race arise,
Stretch their limbs, unclose their eyes,
Claim the earth, and seek the skies.

Gliding through Magellan's straits,
Where two oceans ope their gates,
What a spectacle awaits!
The immense Pacific smiles
Round ten thousand little isles,
—Haunts of violence and wiles.

But the powers of darkness yield,
For the Cross is in the field,
And the light of life reveal'd:
Rays from rock to rock it darts,
Conquers adamant hearts,
And immortal bliss imparts.

North and west, receding far
From the evening's downward star,
Now I mount Aurora's car,—
Pale Siberia's deserts shun,
From Kamtschatka's headlands run,
South and east, to meet the sun.

Jealous China, strange Japan,
With bewildered thought I scan:
—They are but dead seas of man.
Lo! the eastern Cyclades,
Phoenix-nests, and halcyon seas;
But I tarry not with these.

Pass we now New Holland's shoals,
Where no ample river rolls;
—World of undiscover'd souls!
Bring them forth;—'tis Heaven's decree;
Man, assert thy dignity;
Let not brutes look down on thee.

Either India next is seen,
With the Ganges stretch'd between;
Ah! what horrors here have been.
War, disguised as commerce, came;
Britain, carrying sword and flame,
Won an empire,—lost her name.

By the gulf of Persia sail,
Where the true-love nightingale
Wooes the rose in every vale.
Though Arabia charge the breeze
With the incense of her trees,
On I press o'er southern seas.

Cape of Storms, thy sceptre's fled,
And the angel Hope, instead,
Lights from heaven upon thy head.
St. Helena's dungeon-keep
Scowls defiance o'er the deep;
There Napoleon's relics sleep.

Mammon's plague-ships throng the waves;
Oh! 'twere mercy to the slaves,
Were the maws of sharks their graves.
Hercules, thy pillars stand,
Sentinels of sea and land;
Cloud-clapt Atlas towers at hand.

Mark the dens of caitiff Moors;
Ha! the pirates seize their oars;
—Fly the desecrated shores.
Egypt's hieroglyphic realm,
Other floods than Nile's o'erwhelm;
—Slaves turn'd despots hold the helm.

Judah's cities are forlorn,
Lebanon and Carmel shorn,
Zion trampled down with scorn.
Greece, thine ancient lamp is spent;
Thou art thine own monument;
But the sepulchre is rent.

And a wind is on the wing
At whose breath new heroes spring,
Sages teach, and poets sing.
Italy, thy beauties shroud
In a gorgeous evening cloud;
Thy refulgent head is bow'd:

Yet where Roman genius reigns,
Roman blood must warm the veins;
—Look well, tyrants, to your chains.
Feudal realm of old romance,
Spain, thy lofty front advance,
Grasp thy shield, and couch thy lance.

At the fire-flash of thine eye,
Giant bigotry shall fly;
At thy voice, oppression die.
Lusitania, from the dust
Shake thy locks; thy cause is just;
Strike for freedom, strike and trust.

France, I hurry from thy shore;
Thou art not the France of yore;
Thou art new-born France no more.
Sweep by Holland like the blast;
One quick glance at Denmark cast,
Sweden, Russia;—all is past.

Elbe nor Weser tempt my stay;
Germany beware the day
When thy schoolmen bear the sway
Now to thee, to thee I fly,
Fairest isle beneath the sky
To mine heart, as in mine eye!

I have seen them, one by one,
Every shore beneath the sun,
And my voyage now is done.
While I bid them all be blest;
Britain, thou'rt my home, my rest;
My own land I love thee best.—MONTGOMERY.

THE GREAT BIRD OF PARADISE.
(*Paradisea major*.)

THIS is the common or great Bird of Paradise,—*Paradisea apoda* of Linnaeus, and *Paradisea major* of Shaw. The length of the bird is usually two feet, measuring from the bill to the tip of the inside feathers. This beautiful creature has been in Mr. Beale's possession nine years, and was originally procured from the Island of Bouru, (one of the Molucca group). The account of this bird having no legs, being constantly on the wing, and in the air, on which it lived, are, of course, perfectly fabulous: to support this account, however, the legs of the bird were always cut off when the preserved specimens were offered for sale. Another reason for cutting off the legs is, that the birds are found to be more easily preserved without them; besides that the Moors

wanted the birds without legs, in order to put them, in their mock fights, on their helmets as ornaments.

These birds are found at the Aroo Islands, during the westerly or dry monsoon, and they return to New Guinea as soon as the easterly or wet monsoon sets in. They come always in a flock of thirty or forty, and are led by a bird, which the inhabitants of Aroo call the king. This leader is black, with red spots, and constantly flies higher than the rest of the flock, a circumstance which occasions their ruin when the king alights on the ground, whence they are not able to rise, on account of the singular structure and disposition of their plumage. They are likewise unable to fly with the wind, which would destroy their loose plumage, but take their flight constantly against it. From the delicacy and harmony in the arrangement of the colours in this bird, as well as its remarkably light and delicate appearance, it may well be named the Bird of the Sun, or of Paradise, for it surpasses in beauty the whole of the feathered creation.

The neck of this bird is of a beautiful canary-yellow colour, blending gradually into the fine chocolate colour of the other parts of the body; the wings are very short, and of a chocolate colour. Underneath them, long, delicate, and gold-coloured feathers proceed from the sides in two beautiful and graceful tufts, extending far beyond the tail, which is also short and of a chocolate colour, with two very long shafts of the same hue. At the base of the mandibles, the delicate plumage has, during one time, (according as the rays of light are thrown upon it,) the appearance of a fine black velvet, and at another a very dark green, which contrasts admirably with the bright emerald of the throat. There is nothing abrupt or gaudy in the plumage of this bird; the colours harmonize in the most elegant manner, and the chasteness does not fail to excite our admiration. The mandibles are of a light blue, irides bright yellow, and the feet of a lilac tint.

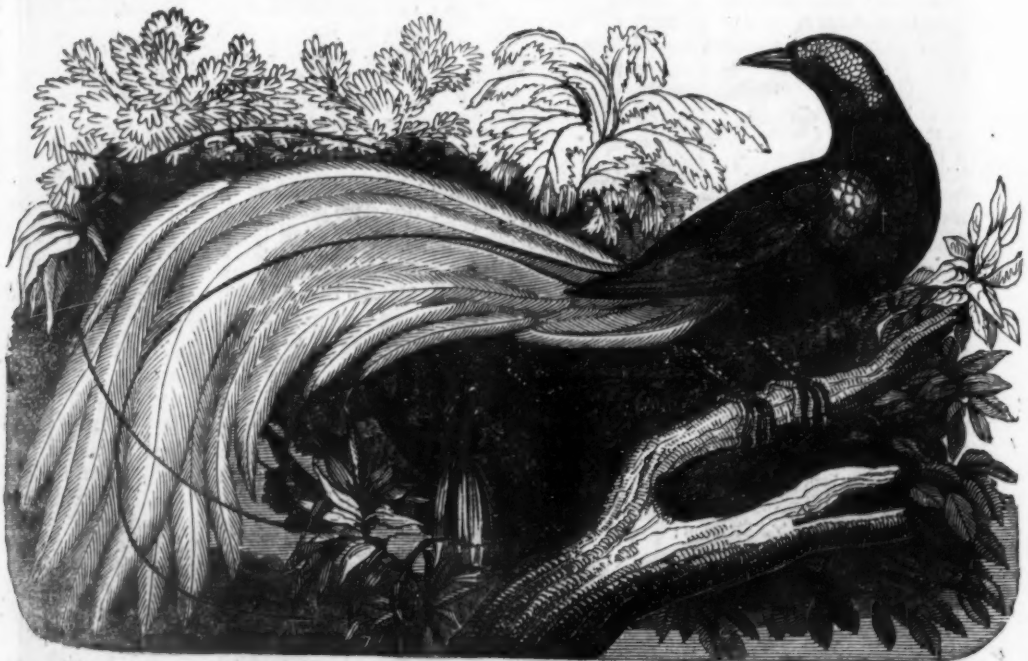
This elegant creature has a light, playful, and graceful manner, with an arch and impudent look; dances about when a visiter approaches the cage, and seems delighted at being made an object of admiration. Its notes are very peculiar, somewhat resembling the cawing of the raven, but far more varied. It washes itself regularly twice daily, and after having performed its ablutions, throws its delicate feathers up nearly over the head, the quills of which feathers have a peculiar structure, so as to enable the bird to effect this object. Its food during confinement is boiled rice, mixed up with soft egg, together with plantains and living insects of the grasshopper tribe. It will eat insects when in a living state, but will not touch them when dead.

I observed the bird, previously to eating a grasshopper, given him in an entire or unmutated state, place the insect upon the perch, keep it firmly fixed with the claws, and divesting it of the legs, wings, &c., devour it with the head always placed first.

A drawing of the bird, of the natural size, was made by a Chinese artist. This was taken one morning to the original, who paid a compliment to the artist by considering it one of his own species. The bird advanced steadfastly towards the picture, uttering at the same time its cawing congratulatory notes; it did not appear excited by rage, but pecked gently at the representation, jumping about the perch, knocking its mandibles together with a clattering noise, and cleaning them against the perch, as if welcoming the arrival of a companion.

After the trial of the picture, a looking-glass was brought, to see what effect it would produce upon the bird, and the result was nearly the same; he regarded the reflection of himself most steadfastly in the mirror, never quitting it during the time it remained before him.

[From BENNET'S Wanderings in Polynesia.]



THE GREAT BIRD OF PARADISE.